Details of self help groups are included in the newsletter. Usually between four and six groups function in the practice at one time. These have included relaxation, yoga for men, first time mothers, parents of teenagers, and groups for those who wish to lose weight or give up smoking. The newsletter also contains items of health information—for instance, on hypothermia, flu jabs, taking your temperature, food labelling, and immunisations for holidays. Other items have included news of staff changes, book reviews, articles on the history of the practice, details of fundraising events held by the Practice Participation Association, and local issues related to health.

The newsletter covers four sides of A4 paper. A typical front page is shown in the figure.

How is the newsletter distributed?

During 1982 the practice register was arranged geographically by volunteers to create a street index. It is thus possible to identify patients who live in a household, and labels are printed with the names of individual patients, one label per household. The task of reorganising the practice register of 11 500 patients geographically would probably occupy a full time person for about three weeks.

Two voluntary managers organise the distribution of newsletters to individual households. One hundred and twenty volunteers have been recruited by advertisements in the newsletter and in the surgery. Most deliver 50 to 100 newsletters in a geographically limited area, usually near their homes. To meet the requirements of the local medical committee that the newsletter should not be construed as advertising for the practice, each newsletter is folded in three, leaving the outside largely blank, and sealed with an address label.

The cost of producing each edition of the newsletter is approximately £150. This is met by the association, which has a successful fundraising group. The cost is low only because of the enormous amount of voluntary help offered by members of the practice. The self adhesive address labels cost £45 to produce for each edition, and this is met by the practice—the only cost to the doctors of the newsletter.

What does the newsletter achieve?

To assess what impact the newsletter has on members of the practice, a survey was carried out of patients' views of the newsletter: 178 patients who attended one of the surgeries and 42 patients who attended an open meeting of the association completed a questionnaire. Of these patients, 78% had heard of *Woking Well*, most of whom knew that it was the newsletter of the practice association; 65% had read the last issue, though only 42% could remember a specific item in the last issue. Few patients made negative comments about the newsletter in the questionnaire, and no one has ever asked to be excluded from the delivery list.

There have been few spontaneous contributions from patients, but many people tell the deliverers that they welcome the newsletter, and several new patients have said how impressed they were by this evidence of community feeling in the practice. Delivering the newsletter is a simple task, and many people seem to enjoy having the opportunity to give something back to the practice in this way. Several have become group leaders or fundraisers, and the newsletter clearly performs an important recruiting role for the Practice Participation Association.

Conclusion

The practice newsletter has been produced regularly for three years with voluntary help, and thus the cost can be supported by the Practice Participation Association. Delivering it to households provides an unusual way of informing all members of the practice of the association's activities. It is hoped that the newsletter helps to promote a feeling among patients that they belong to a practice "community."

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Practice Research

Patterns of respiratory illness in the first year of life

C J WATKINS, Y SITTAMPALAM, D C MORRELL, S R LEEDER, E TRITTON

Abstract

This paper describes a study of respiratory illness during the first year of life in a cohort of infants who were born between 1975 and 1978 to mothers who were registered with two inner London group general practices. The types of respiratory illness and their relation to the season of the year and season of birth of the child are examined. The relations among the frequency and type of respiratory illness and several social and family factors that have previously been shown to be associated with high levels of respiratory morbidity are also described.

Department of General Practice, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, 80 Kennington Road, London SE11 6SP
C J WATKINS, MRCP, senior lecturer in general practice
Y SITTAMPALAM, MSC, lecturer in medical statistics
D C MORRELL, OBE, FRCGP, professor of general practice
S R LEEDER, FRACP, FFCM, professor of community medicine, University of Sydney, Australia
E TRITTON, BSW, research assistant
Correspondence to: Dr Watkins.

Introduction

An association between various personal and family factors and an increased respiratory morbidity in children has been identified.[1-4] These community surveys have relied on the mothers' responses to questionnaires at interview about their infants' health to estimate the occurrence of respiratory illness. Such estimates have disagreed substantially with estimates derived from direct studies of respiratory illness in patients who have presented to attending general practitioners.[5,6]

Most serious respiratory illness in infancy is managed by general practitioners. Apart from the need for accurate diagnosis and effective treatment for the acute illness, the problem for the attending general practitioner is to identify and treat appropriately

any respiratory illnesses that are likely to predispose to poor respiratory health in the future. Defining such illness is necessary before trials of alternative methods of treatment that are designed to improve prognosis can be carried out.

This paper describes the patterns of respiratory illness in children who presented to general practitioners during the first year of life and relates these to several family and social variables that have been found to be important determinants of respiratory health in children. A second paper relates measures of ventilatory capacity at the age of 5 to respiratory illnesses in the first year of life.[1]

Methods

The study was done in two National Health Service group practices situated in the inner London Borough of Lambeth. All children who were born to mothers who were registered with these practices between 1 June 1975 and 31 May 1978 were eligible for inclusion. To compare the socioeconomic characteristics of those who left the study practices during the first year of life with those who remained, all children who were enrolled were classified into social groups using a classification of residential neighbourhoods (ACORN) (CACI Market Analysis Division, London WC1V 6DR). This is a social classification based on the characteristics of area of residence and requires only the identification of the individual's postcode to allocate the individual to a social group.

Throughout the first year of each child's life consultations with the general practitioner were recorded on special structured medical records. At consultations for respiratory illness the general practitioners recorded detailed clinical information on the presenting symptoms and physical signs. They distinguished first consultations from subsequent consultations in each episode of illness and were thus able to describe discrete episodes of respiratory illness. The records were checked for completeness by a research assistant after each consultation. At the child's first birthday a questionnaire was administered to the mother by a trained interviewer. This recorded the child's health during the first year of life, the health of the mother and father, and other social variables that were thought to have an important influence on the frequency of respiratory illness. The data were analysed using the regression techniques of the statistical package GLIM.[2] These techniques enable the effects of several factors to be examined simultaneously.

Definitions of respiratory illness—Diagnostic labelling of respiratory illness is notoriously unsatisfactory.[3] This was confirmed in this study by giving standardised notes to the doctors, who differed widely in their diagnostic responses. The doctors, however, reliably identified first consultations in episodes of illness and were consistent in whether they recorded the presence or absence of adventitious breath sounds on auscultation of the chest. From these records upper and lower respiratory illness was defined as follows: (a) as episode of "upper" respiratory illness, no recordings of adventitious lung sounds made at any consultation, (b) as episode of "lower" respiratory illness one or more consultations at which adventitious lung sounds were recorded.

Results

Altogether, 554 infants were enrolled into the study. During the first year of the study, 132 (24%) moved away from the study practices. There was no significant difference between those who were lost to the study and those who remained with respect to sex and socioeconomic characteristics of areas of residence identified by the ACORN classification (see Methods). One infant died of a cot death at the age of three months. Of the children for whom there were complete consultation data, 404 (96%) of the mothers were interviewed at their child's first birthday.

Table I shows the frequency of consultations for episodes of respiratory illness. Only three children in the cohort were admitted to hospital with respiratory disease. Children with episodes of both upper and lower respiratory illness presented more frequently in autumn and winter than in the summer months. Children with episodes of lower respiratory illness presented frequently during December, January, and February, with a peak in February in 1976, 1977, and 1978 and in March 1979.

Figure 1 shows the number of episodes of upper respiratory illness per 100 children over the four years of the study. For children born in the spring, summer, and autumn the incidence of upper respiratory illness peaked in the first winter after birth. Children who were born in winter appeared not to experience much upper respiratory illness in their first winter but showed a peak in the subsequent winter comparable to that for children who were born in other seasons of the year. Figure 2 shows the pattern of lower respiratory illness according to the season of the year in which the child was born. Again a winter peak occurred in lower respiratory illness for those children who were born in the spring, summer, and autumn. Children who were born in the winter months had no peak incidence of lower respiratory illness in either their first or their second winter.

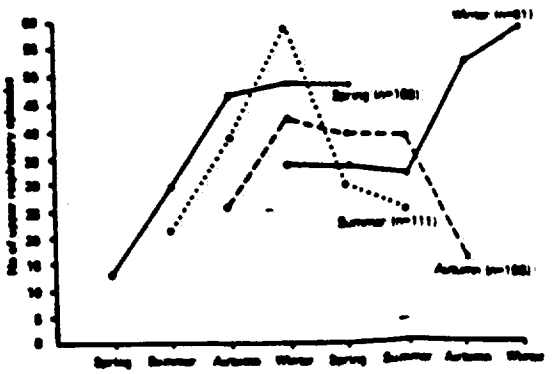

FIG 1—Number of episodes of upper respiratory illness per 100 children by season of birth.

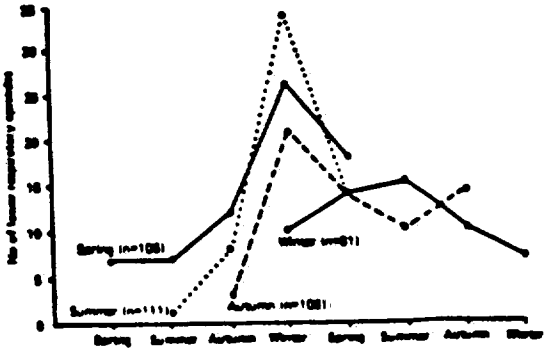

FIG 2—Number of episodes of lower respiratory illness per 100 children by season of birth.

Relation of upper and lower respiratory illness to episodes of non-respiratory illness

There was no relation between the frequency of consultations for non-respiratory illness and the frequency of consultations for respiratory illness. High consulting rates for upper respiratory illness were not related to consultations for lower respiratory illness. This suggests that those children with high consultation rates for respiratory illness were not just high users of medical care but that they experienced a much higher incidence of these illnesses.

Relation of consultations for respiratory illness to social and family factors

Information was collected about several social and family variables that were found in previous studies to be associated with an increased frequency of lower respiratory illness (table II). The attack rate of respiratory illness was evenly divided between the sexes. For children of parents who were in manual occupations there was an attack rate of lower respiratory illness of 70·4/100 compared with an attack rate of 37·5/100 for those whose parents worked in non-manual occupations. Lower respiratory illness was also reported more frequently in children who shared a room with an adult. Other factors associated with an increased frequency of consultations for lower respiratory illness included parental smoking, a productive cough in either parent, gas cooking in the home, sharing a room with another child, and parental symptoms of asthma. None of these was significant. In addition, no advantage was found in this study for infants who were breast fed in terms of protection against lower respiratory illness.

To test the independent effects of these social and family factors on frequency of lower respiratory illness in the first year of life, a multiple regression analysis was done using the factors listed in table II. The parents' occupation remained an important factor even when taking into account sharing a room with an adult and parental smoking. Attack rates of lower respiratory illness in children of parents in manual employment were estimated to be, from this model, 57·5/100 children (95% confidence limits

41·4-80·1) and 33·8/100 children (95% confidence limits 24·0-47·5) of parents in non-manual occupations.

This effect of the parents' occupation might have represented a difference in the propensity of the mother to consult for her sick child. Examining the frequency of consultation for non-respiratory illness by parents' occupation did not confirm this, suggesting that the high frequency of consultation for lower respiratory illness in children of those in manual occupations was due to a higher frequency of episodes of lower respiratory illness rather than a behavioural difference of the social classes.

TABLE I—*Experience of respiratory illness recorded by the general practitioner in a birth cohort of 404 children*

Experience of respiratory illness	No (%) of children
No respiratory illness	78 (19·3)
Upper respiratory illness only	177 (43·8)
Lower respiratory illness	149 (36·9)
One episode	100 (24·8)
Two episodes	28 (6·9)
Three episodes	11 (2·7)
Four or more episodes	10 (2·5)
Upper and lower respiratory illness	113 (28·0)
All upper respiratory illness	290 (71·8)

TABLE II—*Relation between several social and family factors and the attack rate of lower respiratory illness per 100 children per year presented in a birth cohort of 404 children*

	No	Attack rate/100 children	95% confidence interval	Significance level
Sex				
Boy	204	50·6	40·6-71·5	p>0·25
Girl	200	56·3	43·3-68·1	
Father's occupation*				
Non-manual	160	37·5	29·1-48·3	p<0·001
Manual	228	70·4	53·5-92·7	
Shares bedroom with adult				
No	179	42·9	34·3-53·7	p<0·001
Yes	225	68·5	53·3-88·1	
Parental smoking*				
Neither	137	48·2	38·0-61·2	
Father only	80	75·0	55·7-99·0	
Mother only	53	50·9	35·6-72·8	0·05<p<0·1
Both	118	57·6	43·0-77·2	
Parental cough/phlegm*				
Neither	240	56·2	47·6-66·2	
Father only	69	68·1	52·5-88·5	
Mother only	39	38·5	20·6-57·0	
Both	31	61·3	42·4-87·6	p>0·1

* Excludes 16 individuals on whom no information about father's occupation, smoking habits, or respiratory symptoms was available.

Discussion

Because of the wide interdoctor variation in the diagnosis of respiratory illness we have avoided using terms such as bronchiolitis, pneumonia, bronchitis, and wheezy bronchitis. For similar reasons we have avoided using "rhonchus" or "crepitation," for example, in describing lung sounds but instead have described the consultations for illness according to whether or not adventitious sounds were heard in the lung fields and defined episodes of respiratory illness accordingly.

The high peaks of respiratory illness in the winter months, and in particular the peak of incidence of lower respiratory illness occurring in the month of February, strongly suggest infection. In addition, the relation of season of birth to respiratory illness further supports infection as a major factor. The lowest frequency of both upper and lower respiratory illness occurred in the first three months of life. The peak for both is in the winter months for children who were born in the spring, summer, and autumn. For those born in winter few upper or lower respiratory illnesses were recorded in their first winter. In the second winter the expected seasonal peak of upper respiratory illness occurred, but a lower rate of lower respiratory illness was noted. Inherited maternal immunity presumably protects these children during the winter months immediately after birth. By the time they are exposed in the second winter their defence mechanisms have matured sufficiently to protect them from infection. The role of immunity can be clarified only when simple methods of identifying viruses and of measuring the immune status of children become available for use in general practice. Studies carried out in hospital are unlikely to be helpful—only three of the 404 children in our study were admitted to hospital.

In this study the role of family health and social variables is not as clear cut as that reported by Leeder *et al*.[7] The striking finding in this study is the social class difference in frequency of consultation for respiratory illness, with high consultation rates for those whose fathers were in manual occupations. This is not explained by the fact that the families from which such children come are more likely to live in overcrowded conditions nor that the parents are more likely to smoke and have a productive cough nor that mothers of such children were less likely to breast feed. The fact that the propensity to consult for non-respiratory illness was similar for children whose fathers were in manual and non-manual work indicates that this is not a behavioural characteristic but is a true representation of the different frequency of occurrence of respiratory illness according to parents' occupation.

Several conclusions arise from this study. Episodes of lower respiratory illness, defined as those in which there were one or more consultations at which adventitious lung sounds were recorded, are particularly frequent in the children of manual workers. This cannot be explained by the many social and family variables examined in this study such as overcrowding, smoking habits, parents' respiratory symptoms, and breast feeding. The relative freedom from respiratory illness in the first three months of life and the seasonal incidence of lower respiratory illness in children who were born in the winter reinforces the infective (as opposed to allergic) aetiology of lower respiratory illness in young children. Further studies of the aetiology of respiratory illness in children may more usefully focus on nutrition and immunity than on the traditional methods of environmental pollution.

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